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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/491,284 01/26/00 GITIS N 3123-149-1

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WM02/1010

EXAMINER

OMETZ, D

ART UNIT

PAPER NUMBER

2652

DATE MAILED:

10/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/491,284

Applicant(s)

GITIS ET AL.

Examiner

David L. Ometz

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2001.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-69 is/are pending in the application.
- 4a) Of the above claim(s) 5-9 and 40-69 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 10-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9, 11.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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DETAILED ACTION

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

2. Claim 10 is rejected under 35 U.S.C. 102(e) as being clearly anticipated by Fukuoka et al (US Pat 5541789) (see Fig. 7).

3. Claims 1, 2, 10-12, 17, 18, 26, 31, 33-39 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Brezoczky et al (US Pat 4819091) (see Figs. 2 and 5).

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brezoczky et al. Brezoczky et al shows a V-shaped slider/pad in Figure 5 that contacts the recording disk during reading/writing. However, Brezoczky et al does not show the wide part of the V-shaped portion being spaced from the trailing edge of the pad. The Examiner takes Official notice that it is old and well known in the art to space the trailing edge of a slider pad from the trailing edge. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to space the pad from the trailing edge as doing this would decrease the amount of contact between the disk and pad, thus creating less friction and wear therebetween.

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6. Claims 3, 4, 14-16, 20-25, 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brezoczky et al in view of Fukuoka et al. Brezoczky et al shows a V-shaped slider/pad in Figure 5 that contacts the recording disk during reading/writing. However, Brezoczky et al does not show the pad being U-shaped, parabolic shaped or hyperbolic-shaped wherein the wide part of the pad is spaced from the trailing edge. With regard to the specific shape, Fukuoka et al shows a U-shaped pad in Figure 7 wherein Fukuoka et al states in col. 10, lines 30-32 that the pad may be "a parabola, circle, or oval." Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to re-shape the pad of Brezoczky et al into one of a U-shape, parabolic, or hyperbolic shape as taught by Fukuoka et al. The rationale is as follows: one of ordinary skill in the art would have been motivated re-shape the V-shaped pad of Brezoczky et al as doing this would permit the sliding characteristics of the pad to be altered to the specific needs of various disk drives. No unobvious result is seen in changing the shape of the pad of Brezoczky et al when viewed with the teachings of Fukuoka et al, as each of the V-shape, U-shape, parabolic shape, and hyperbolic shapes all would permit contact with the disk during operation.

Secondly, with regard to the wide part of the pad being spaced from the trailing edge of the pad, the Examiner takes Official notice that it is old and well known in the art to space the trailing edge of a slider pad from the trailing edge. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to space the pad from the trailing edge as doing this would decrease the amount of contact between the disk and pad, thus creating less friction and wear therebetween.

7. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brezoczky et al in view of Kubo et al (US Pat 4901185). Brezoczky et al shows a V-shaped slider/pad in Figure 5 that contacts the recording disk during reading/writing. However, Brezoczky et al does not show the leading edge of the pad being spaced from the leading edge of the slider. Kubo et al

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shows a contact slider in Figure 10 that has a leading edge of a pad 104 spaced from a leading edge of the slider body due to the tapered portion 40. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a taper to the pad of Brezoczky et al in order to space the leading edge of the pad from the leading edge of the slider as taught by Kubo et al. The rationale is as follows: one of ordinary skill in the art would have been motivated to taper the leading edge of Brezoczky et al's pad as doing this would permit less contact area between the pad and disk, thereby creating less friction and wear between the pad and disk.

8. Claims 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brezoczky et al in view of Kubo et al as applied to claim 27 above, and further in view of Fukuoka et al. Brezoczky et al shows a V-shaped slider/pad in Figure 5 that contacts the recording disk during reading/writing while Kubo et al shows the pad spaced from the leading edge of the slider. However, neither Brezoczky et al nor Kubo et al shows the trailing edge of the slider being the trailing edge of the pad while also not showing width of the leading edge of the slider being the same as the width of the trailing edge of the slider. Fukuoka et al shows a slider 1 with a U-shaped pad in Figure 7 wherein the trailing edge of the pad is the trailing edge of the slider. The width of the leading edge of the slider is identical to the width of the trailing edge of the slider. Therefore, with regard to the trailing edge of the pad being the trailing edge of the slider, it would have been obvious to one of ordinary skill in the art at the time the invention was made to move the transducer of Brezoczky et al from the trailing edge of the slider to somewhere in the middle of the pad as performed by Fukuoka et al, thereby making the trailing edge of the slider the trailing edge of the pad. The rationale is as follows: one of ordinary skill in the art would have been motivated to make the trailing edge of the slider the trailing edge of the pad as doing this would remove the transducer from the exposed trailing edge

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of the slider and move it to a more protected area within the pad, thus decreasing the amount of potential damage to the transducer from collisions.

With regard to the widths of the trailing and leading edges of the slider being the same, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the widths of the slider in Brezoczky et al the same as taught by Fukuoka et al. The rationale is as follows: one of ordinary skill in the art would have been motivated make the widths of the leading and trailing edges of the slider the same as doing this would simplify the manufacturing process by permitting the slider bodies to be cut into simple blocks from a single wafer, thus eliminating the need for more complex diagonal cuts of the wafer as would be the case in the Brezoczky et al slider.

9. Claim 30 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brezoczky et al in view of Kubo et al as applied to claim 27 above, and further in view of Saitoh et al (US Pat 4926274). Brezoczky et al shows a V-shaped slider/pad in Figure 5 that contacts the recording disk during reading/writing while Kubo et al shows a tapered pad. However, neither Brezoczky et al nor Kubo et al shows the distance between the leading edge of the pad and the trailing edge of the slider being substantially less than a distance between the leading edge of the pad and the leading edge of the slider as recited in claim 30. Saitoh et al shows a slider pad in Figure 1 that shows the distance between the leading edge of the pad 7 and the trailing edge of the slider being substantially less than a distance between the leading edge of the pad 7 and the leading edge of the slider. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to make the distance between the leading edge of the pad and the trailing edge of the slider being substantially less than a distance between the leading edge of the pad and the leading edge of the slider as taught by Saitoh et al as doing this would

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again permit less area of the pad to contact the disk during operation, thus decreasing the amount of friction and wear that occurs between the disk and slider.

10. Applicant's arguments filed 5/7/01 have been fully considered but they are not persuasive. Applicant asserts on pages 8 and 9 that neither Fukuoka et al nor Brezoczky et al show a slider that includes a pad. However, the examiner maintains that, with regard to the Fukuoka et al reference, Figure 7 shows a slider 1 with an integral landing pad that faces the disc during recording/reproducing (the pad is created in part by the chamfered front edges so as to create a U-shaped front edge of the landing pad). Brezoczky et al shows a slider in Figure 5 with a pad 52 combined with the slider base 56.

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David L. Ometz whose telephone number is (703) 308-1296. The examiner can normally be reached on M-F, 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on (703) 305-9687. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9314 for regular communications and (703) 872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.



David L. Ometz
Primary Examiner
Art Unit 2652

DLO
October 5, 2001